

Patricia H. Richards

WEC General Manager

Patty Richards is a seasoned and proven utility leader and energy professional. She is highly accomplished with over 25 years of experience in utility power supply optimization and risk management. She has comprehensive experience related to power supply management including ratemaking, generation plant bidding, testimony, energy policy, economic analysis, power plant development, demand side management planning and evaluation, detailed understanding of energy market rules, and risk management.

Ms. Richards has evaluated power plant economics, prepared and defended integrated resource plans that were approved by state regulators, developed power costs for rate case filings, provided expert witness and testimony in contested proceedings, worked with municipal governments and committees to create power procurement strategies, prepared and reviewed power plant financial proformas including hydro, solar, wind, biomass and fossil fuel power plants, managed power cost including buying and selling power to optimize portfolios, prepared market studies, analyzed and implemented special contracts, performed asset valuations and other components of successful utility and power purchasing programs and operations. Ms. Richards is an expert in power portfolio management and has worked effectively with municipal and state leaders in developing generation projects.

Ms. Richards has a Master of Science in Business from Saint Michaels College, and a Bachelor of Science degree in mathematics and economics from Union College. She also holds a Risk Management certification from the Insurance Institute of America.

RECENT AND RELEVANT EXPERIENCE

Power Procurement, Transactions, Commerce & Planning

- Advisor to Washington Electric Cooperative (WEC) in a multitude of power supply related matters and portfolio management practices. Lead and evaluated WEC's participation in a 26-year contract with Hydro Quebec (HQ). Provided contract review, portfolio analysis, economic modeling, and market price forecast simulation to assist WEC in its decision making to enter a long term contract with HQ. Also provided expert testimony and acted as a witness in regulatory proceedings to obtain approval of contract. Perform bill verification, review ISO-NE bidding practices of load and resources, and prepare annual power cost budget. Provide WEC with renewable portfolio market intelligence and REC market sales strategies to maximize the value of its RECs. Power supply manager for Woodsville Water and Light Department. Manage and review load and resource charges. Provide bill verification, annual budgeting, and monthly reporting functions. Assisted in Woodsville's negotiation of transmission agreements and working to identify and secure long-term, stably priced contracts to serve its load needs long term.
- Participated in securing hedging transactions on behalf of Amtrak for its load in the PJM power pool part of a multi-year strategy that has saved Amtrak millions of dollars supplying its electrified Northeast Corridor train and station service, while stabilizing costs.
- Prepared, defended and achieved regulatory approval for several integrated resource plans for municipal electric utilities in Vermont, pursuant to Public Service Board regulations and Vermont 20-Year Electric Plan guidelines.

- Lead energy advisor to the City of Salem, Massachusetts in its review of the future operation of 740 MW Salem Harbor power station. Analysis will inform the City of Salem leaders as to the possible necessity of the current and future power plant operation at the site. Evaluation includes review of ISO-NE's reliability assessments related to the greater Boston area, transmission system upgrades, FCM market participation, and feasibility of the site to host other generation.
- Lead power supply manager and advisor to Massachusetts Port Authority in all facets of market participation in the ISO-NE markets. Manage and review load and resource charges. Bid load into ISO-NE market system daily and manage file data downloads. Provide bill verification, annual budgeting, and monthly reporting functions. Reduced client's power supply costs by 2% in first year of contract through actively managing load bidding function into the ISO-NE market system.
- Project manager and renewable energy advisory services to Narragansett Bay Commission. Enrolled renewable project in various state RPS markets, set up NEPOOL GIS accounts, and facilitated REC sales for client.
- Project manager and renewable energy advisory services to Raap Solar. Enrolled renewable project in various state RPS markets, set up NEPOOL GIS accounts, and facilitated REC sales for client.
- Project manager and renewable program advisor to the New York Power Authority. Selected as part of a team to provide Consulting Services for Generation, Transmission, Fuel Supplies and Energy Policy and Regulatory Activities. Retained to assist NYPA by providing expertise with relevant experience in technical, economic, siting and environmental aspects of power system development including generation, transmission and fuel supply. The focus of our work is anticipated to fall in the following areas relative to renewable initiatives administered through NYPA; Concept development and market assessment; Financial and economic models; Market and economic development programs.

Financial & Valuation

- Project manager for asset valuation analysis of hydro facility in Vermont. Prepared energy and REC forecast as well as completed an asset valuation of the facility. This effort involved developing specific proformas, and cash flow and other valuations, for the municipality considering purchase of hydro plant.
- Project manager for hydro valuation study and review of 13 hydro facilities with nameplate rating of 560 MW.
- Acted as a lead advisor and provided analysis to the Vermont System Planning Committee in a study of potential for combined heat and power (CHP) and customer sited generation for the State of Vermont. Estimated the economic and technical potential within 16 load zones to develop various CHP technologies, wind, solar, and farm methane power projects which could be sited at customer premises. Developed cost effectiveness testing of various technologies, estimated the amount of kW and kWh potential that could be achieved throughout the state using various fuel costs, technology costs, and avoided utility costs.
- Reviewed and evaluated financial proformas of numerous generating facilities including biomass plants, natural gas, wind, and solar projects.
- Prepared economic modeling and evaluation of a 40 MW peaking project in Swanton, Vermont on behalf of Vermont Public Power Supply Authority. Created testimony and provided analysis that resulted in the approval of the project by the Vermont Public Service Board and ultimate construction and commissioning of the plant.

- Enrolled large power plant project in the ISO-NE as a new generator and led all facets of market participation for the generator including clearing in the FCM markets, enrollment as a Black Start unit, clearing of the FRM market, and daily bidding into the energy markets.
- Prepared and conducted Integrated Resource Planning analysis and modeling for Vermont Electric Cooperative using Monte Carlo simulation. Created models, prepared summary presentations, and worked with client to obtain regulatory approval from the Vermont Public Service Board for the filing.

Regulatory, Rates, Tariffs, Special Contracts

- Developed cost based net metering tariff for Washington Electric Cooperative and filed with Vermont Public Service Board. Received approval and implemented tariff for new net metered systems. Submitted application to Massachusetts Department of Energy Resources for aggregation of net metered RECs and received approval.
- Project manager and prepare testimony to the Michigan Public Utility Commission regarding Detroit Edison Power Supply Cost Recovery filing. In this case Detroit Edison filed for a projected rising power costs over a 5 year period. Analysis and testimony evaluated appropriateness of investments in electric generation assets to comply with environmental requirements.
- Project manager and submitted testimony to the Michigan Public Utility Commission regarding Consumers Energy Company's Power Supply Cost Recovery filings. Consumers Energy Company filed for a significant increase to retail rates. Reviewed appropriateness of load forecast and investments in electric generation assets to comply with environmental and legal requirements. Also reviewed and analyzed portions of the Consumers Energy Company's resource optimization practices and bidding practices into the MISO system related to dispatch of its power plants.
- Project manager and submitted testimony relative to power supply costs for Washington Electric Cooperative in VT PSB docket 7691 (Washington Electric Cooperative Rate Case)
- Project manager and lead witness on behalf of Washington Electric Cooperative relative to cost benefits analysis of long term contract with Hydro Quebec US VT PSB docket 7670 (HQUS PPA)
- Project manager and lead witness relative to power supply costs for Washington Electric Cooperative in VT PSB docket 7825 (Washington Electric Cooperative Rate Case)
- Prepared power cost related analysis and led the Vermont Public Power Supply Authority through approximately 20 rate case filings in which all filings were approved by the Vermont Public Service Board.
- Participated in efforts to develop an open access transmission tariff for the Village of Swanton. Created and edited OATT tariff to accommodate Swanton's needs, reviewed calculations of rates, and filed with the Vermont Public Service Board.
- Drafted and negotiated various transmission contracts with large investor owned utility on behalf of a municipal utility for local and regional service and transmission billing. The contracts cleared up a backlog of past charges and instituted a fair and equitable service agreement between both parties.

EMPLOYMENT HISTORY

Washington Electric Cooperative
General Manager

East Montpelier, VT
Jun 2013 - present

La Capra Associates, Inc.
Senior Consultant

Boston, MA
Mar 2010 – Jun 2013

Vermont Public Power Supply Authority
Director of Power Supply & Transmission

Waterbury Center, Vermont
Jan 2007 – Mar 2010

South Burlington School District
Business and Operations Manager

South Burlington, Vermont
Jun 2006 – Oct 2006

Burlington Electric Department
Director of Resource Planning
Demand Side Management Evaluator & Planner
Insurance & Benefits Analyst

Burlington, Vermont
Apr 1998 – Jun 2006
Mar 1994 – Apr 1998
Feb 1989 – Mar 1994

Prudential Insurance Company of America,
Actuarial Program (Executive Management Training Program)

Newark, New Jersey
Aug 1986 – Jul 1988

PROFESSIONAL ASSOCIATIONS AND BOARDS

Vermont Clean Energy Board – *Vice Chair (2013)*

Vermont Clean Energy Development Fund – *Investment Committee, Chair*

Sigma Beta Delta – *International Honor Society in Business, Management, and Administration*

Vermont Electric Power Producers Inc. – *Board of Directors, Vice President*

Renewable Energy Vermont – *Board of Directors*

Insurance Institute of America – *Associate in Risk Management*

Northeast Public Power Association Insurance Group – *Chair*

EDUCATION

Saint Michael's College
Master of Science in Business Administration and Management

Colchester, Vermont
2008

Sigma Beta Delta – *International Honor Society in Business*

Thesis: *Vermont Electric Industry Renewable Energy Goal: 25% Renewable by 2025 – Is it Attainable?*

Insurance Institute of America
Risk Management Accreditation (ARM), Insurance Institute of America

Malvern, Pennsylvania
1992

Union College
Bachelor of Science – Mathematics/Economics

Schenectady, New York
1986